REMARKS

Claims 1-38 were pending the application. Claims 1-24 and 35-38 have been canceled, without prejudice, as being directed to a non-elected invention. Claims 25, 27, and 34 have been amended. Accordingly, upon entry of this amendment, claims 25-34 will be pending. For the Examiner's convenience, the pending claims are set forth in Appendix A.

Support for the amendments to claims 25, 27, and 34 may be found, at least, in the specification and claims as originally filed.

No new matter has been added. Any amendments to and/or cancellation of the claims should in no way be construed as an acquiescence to any of the Examiner's rejections and was done solely to more particularly point out and distinctly claim the subject matter of Applicants' invention in order to expedite the prosecution of the application. Applicants reserves the right to pursue the claims as originally filed in this or a separate application(s).

Election/Restriction

The Examiner has required restriction to one of the following inventions under 35 U.S.C. 121:

Group I: Claims 1-17 drawn to polynucleotides and vectors and cells comprising the polynucleotides, classified in class 536, subclass 23.7;

Group II: Claims 18-24, drawn to polypeptides, classified in class 530, subclass 350;

Group III: Claims 25-34, drawn to a method of making a chemical, classified in class 435, subclass 41;

Group IV: Claim 35, drawn to a method of diagnosing *Cornebacterium diptheriae*, classified in class 436, subclass 501;

Group V: Claim 36, drawn to a host cell comprising a disrupted polynucleotide, classified in class 435, subclass 252.3;

Group VI: Claims 37 and 38, drawn to a host cell with a modified polynucleotide, classified in class 435, subclass 252.3.

Applicants hereby elect, without traverse, Group III (claims 25-34) under 35 U.S.C. §121 for prosecution in the present application.

At page 4 of the instant Office Action, the Examiner states that

> This application contains claims directed to the following patentably distinct species of the claimed invention:... In Group 3 a first set of species are cells in claims 28 and 29, and a second set of species are chemicals in claims 31-33.

It is the Applicants' understanding that under 35 U.S.C. §121, an election of a single species for prosecution on the merits is required, to which the claims will be restricted if no generic claim is finally held allowable. As stated by the Examiner, within Group III, claims 25-27, 30, and 34 are generic. Applicants further understand that upon the allowance of a generic claim, Applicants will be entitled to consideration of claims to additional species which are written in dependent from or otherwise include all the limitations of an allowed generic claims as provided by 37 C.F.R. §1.41 *et seq.* Accordingly, within Group III, Applicants hereby further elect the species of "*Corynebacterium glutamicum*" as the cell and "lysine" as the chemical.

Furthermore, at page 5 of the instant Office Action, the Examiner states that "[e]ach sequence is patentably distinct because they are unrelated sequences, the Applicants must elect a single amino acid sequence."

Applicants hereby elect SEQ ID NO:1, *with traverse*. Applicants respectfully submit that the policy set forth in 1192 O.G. 68 (Nov. 19, 1996), which the Examiner references, clearly provides that a reasonable number of sequences are allowed to be claimed in a single application. It has been determined that "normally ten sequences constitute a reasonable number for examination purposes" and, thus, up to ten independent and distinct sequences are often examined in a single application without restriction. M.P.E.P. §804.4 and 1192 O.G. 68 (Nov. 19, 1996). In the interest of

saving considerable time and cost to Applicants and the United States Patent and Trademark Office, and in accordance with 1192 O.G. 68 (Nov. 19, 1996), Applicants respectfully request that at least 10 sequences be examined in the instant application.

Furthermore, it is the Applicants' position that, with respect to the claimed nucleotide sequences, a species election for searching purposes would be more appropriate in this situation.

Applicants respectfully submit that a sufficient search and examination with respect to the claimed nucleotide sequences can be made without serious burden on the Examiner. As the M.P.E.P. states:

> [i]f the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions. M.P.E.P. § 803.

Applicants respectfully submit that the searches with regard to each SEQ ID NO. would be co-extensive and would not involve a serious burden on the Examiner. Applicants therefore request that the Examiner re-characterize the restriction requirement with respect to the SEQ ID NOs. as a species election requirement.

It is the Applicants' understanding that under 35 U.S.C. §121, an election of a single species for prosecution on the merits is required, to which the claims will be restricted if no generic claim is finally held allowable. Applicants submits that claim 1 is generic. Applicants further understand that upon the allowance of a generic claim, Applicants will be entitled to consideration of claims to additional species which are written in dependent from or otherwise include all the limitations of an allowed generic claims as provided by 37 C.F.R. §1.41 *et seq*.

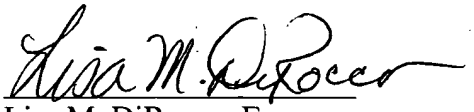
Accordingly, within Group I, Applicants hereby further elect the species of SEQ ID NO:1, SEQ ID NO:5, SEQ ID NO:7, SEQ ID NO:9, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, and SEQ ID NO:23 for search purposes only. Applicants even further elect the species of SEQ ID NO:1 for search purposes only.

Applicants reserve the right to traverse the above restriction with respect to non-elected Groups I-II and IV-VI in this or subsequent applications. *No new matter has been added.*

SUMMARY

If a telephone conversation with Applicants' Attorney would expedite the prosecution of the above-identified application, the examiner is urged to call the undersigned at (617) 227-7400.

Respectfully submitted,



Lisa M. DiRocco, Esq.
Registration No. 51,619
Attorney for Applicants

LAHIVE & COCKFIELD, LLP
28 State Street
Boston, MA 02109
Tel. (617) 227-7400

Dated: **November 18, 2002**

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Please cancel claims 1-24 and 35-38, without prejudice, and amend claims 25, 27, and 34 as follows:

25. **(Amended)** A method for producing a fine chemical, comprising culturing a cell containing a vector comprising the nucleotide sequence of SEQ ID NO:1 ~~a vector of claim 12~~ such that the fine chemical is produced.

27. **(Amended)** The method of claim 25, wherein said method further comprises the step of transfecting said cell with a vector comprising a the nucleotide sequence of SEQ ID NO:1 ~~the vector of claim 11~~ to result in a cell containing said vector.

34. **(Amended)** A method for producing a fine chemical, comprising culturing a cell whose genomic DNA has been altered by the inclusion of ~~a nucleic acid molecule of any one of claims 1-9.~~ an isolated nucleic acid molecule selected from the group consisting of:

a) a nucleic acid molecule comprising a nucleotide sequence which is at least 60% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof;

b) a nucleic acid molecule comprising a fragment of at least 30 nucleotides of a nucleic acid comprising the nucleotide sequence of SEQ ID NO:1, or a complement thereof;

c) a nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence at least about 60% identical to the amino acid sequence of SEQ ID NO:2; and

d) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the fragment comprises at least 10 contiguous amino acid residues of the amino acid sequence of SEQ ID NO:2.

APPENDIX A

25. **(Amended)** A method for producing a fine chemical, comprising culturing a cell containing a vector comprising the nucleotide sequence of SEQ ID NO:1 such that the fine chemical is produced.

26. The method of claim 25, wherein said method further comprises the step of recovering the fine chemical from said culture.

27. **(Amended)** The method of claim 25, wherein said method further comprises the step of transfecting said cell with a vector comprising the nucleotide sequence of SEQ ID NO:1 to result in a cell containing said vector.

28. The method of claim 25, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium.*

29. The method of claim 25, wherein said cell is selected from the group consisting of: *Corynebacterium glutamicum, Corynebacterium herculis, Corynebacterium, lilium, Corynebacterium acetoacidophilum, Corynebacterium acetoglutamicum, Corynebacterium acetophilum, Corynebacterium ammoniagenes, Corynebacterium fujiokense, Corynebacterium nitrilophilus, Brevibacterium ammoniagenes, Brevibacterium butanicum, Brevibacterium divaricatum, Brevibacterium flavum, Brevibacterium healii, Brevibacterium ketoglutamicum, Brevibacterium ketosoreductum, Brevibacterium lactofermentum, Brevibacterium linens, Brevibacterium paraffinolyticum,* and those strains set forth in Table 3.

30. The method of claim 25, wherein expression of the nucleic acid molecule from said vector results in modulation of production of said fine chemical.

31. The method of claim 25, wherein said fine chemical is selected from the group consisting of: organic acids, proteinogenic and nonproteinogenic amino acids, purine and pyrimidine bases, nucleosides, nucleotides, lipids, saturated and unsaturated

fatty acids, diols, carbohydrates, aromatic compounds, vitamins, cofactors, polyketides, and enzymes.

32. The method of claim 25, wherein said fine chemical is an amino acid.

33. The method of claim 32, wherein said amino acid is drawn from the group consisting of: lysine, glutamate, glutamine, alanine, aspartate, glycine, serine, threonine, methionine, cysteine, valine, leucine, isoleucine, arginine, proline, histidine, tyrosine, phenylalanine, and tryptophan.

34. **(Amended)** A method for producing a fine chemical, comprising culturing a cell whose genomic DNA has been altered by the inclusion of an isolated nucleic acid molecule selected from the group consisting of:

a) a nucleic acid molecule comprising a nucleotide sequence which is at least 60% identical to the nucleotide sequence of SEQ ID NO:1, or a complement thereof;

b) a nucleic acid molecule comprising a fragment of at least 30 nucleotides of a nucleic acid comprising the nucleotide sequence of SEQ ID NO:1, or a complement thereof;

c) a nucleic acid molecule which encodes a polypeptide comprising an amino acid sequence at least about 60% identical to the amino acid sequence of SEQ ID NO:2; and

d) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of SEQ ID NO:2, wherein the fragment comprises at least 10 contiguous amino acid residues of the amino acid sequence of SEQ ID NO:2.